

REMARKS

Applicants respectfully request favorable reconsideration of this application.

Applicants note with appreciation the acceptance of the drawings, the acknowledgment of the claim for foreign priority and the receipt of all of the certified copies of the priority documents. *See*, Office Action Summary.

Claims 1–14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis (US 2004/004955) in view of Jain (US 2002/116669). Applicants respectfully traverse.

Claim 1 is directed to a method for binding a work label switching path (LSP) with a protection LSP, and recites:

a Path Switching Label Switching Router (PSL) transmitting a first message which comprises binding information to a Path Merging Label Switching Router (PML) to request for creating the protection LSP of the work LSP;

the PML router assigning a label for the protection LSP based on the first message, and returning a second message which comprises the binding information;

upon receiving the second message, the PSL router binding the work LSP with the protection LSP according to the binding information, and transmitting a notification message which comprises the binding information to the PML switched router;

the PML router binding the work LSP with the protection LSP according to the binding information in the notification message.

The features recited by Claim 1 advantageously solve the known problems of difficult operation and tough management of services resulting from statically binding the work LSP and the protection LSP. Applicants' inventive binding may be implemented via signaling transporting in the process of creating the work LSP and the return LSP. As a result, a static configuration is no longer needed, and the protection configurations of the MPLS become simple and service management becomes easy.

By contrast, Lewis merely provides a method and apparatus for unilaterally forming a bi-directional label switched path between first and second routing devices in a network, so as to

solve the problems of manually establishing a return LSP. Jain simply provides a system and method for fault notification in a data communication network, so as to solve the problems of dropping significant quantities of critical data when performing fault notification on the basis of individual LSPs. Consequently, as discussed in detail below, neither Lewis nor Jain, taken either singly or in combination, teaches or suggests all of the features recited by Claim 1.

The Office Action alleges that Lewis discloses the claimed PSL "transmitting a first message which comprises binding information to a Path Merging Label Switching Router (PML) to request for creating the protection LSP of the work LSP." *See*, Office Action at Page 2 ("See [Lewis] paragraph 0007, lines 1-9 sending a first LSP setup request message comprising a first bi-directional indicator from the first routing device to the second routing device and See paragraph 0067, lines 1-9 Security measures may include authorization codes"). Applicants disagree.

Lewis discloses that "wherein a first unidirectional LSP is established in a message exchange initiated by the first LSP setup request message" (Paragraph 0007, lines 12-14), and that "the resulting two unidirectional label switched paths may be associated with one another at the endpoints to form a bi-directional LSP" (Abstract, lines 9-12). Applicants submit that Lewis' first setup request message establishes a first unidirectional LSP in preparation for establishing a bi-directional LSP, which is different than creating a protection LSP of the work LSP.

Lewis also fails to disclose the claimed binding information. Instead, Lewis teaches that the "first LSP setup request message preferably includes a first bi-direction indicator that uniquely identifies the LSP and specifies the resource requirements of the return LSP" (Paragraph 0009, lines 4-6). Applicants submit that the first bi-direction indicator uniquely identifies the LSP and specifies the resource requirements of the return LSP, which is different than the claimed binding information. Furthermore, Lewis authorization codes do not constitute binding information, as alleged by the Office Action (Page 2).

Consequently, Lewis fails to disclose "a PSL transmitting a first message which comprises binding information to a PML to request for creating the protection LSP of the work LSP," as recited by Claim 1. Moreover, Jain fails to cure the deficiencies of Lewis.

The Office Action also alleges that Lewis discloses the claimed "returning a second message which comprises the binding information." *See*, Office Action at Page 2 ("See [Lewis]

paragraph 0007, lines 9–17 sending a second LSP setup request message from the second routing device to the first routing device in response to the first bi-directional indicator”). Applicants disagree.

The claimed second message cooperates with the first message to complete the establishment of the protection LSP for the work LSP. Lewis, to the contrary, teaches that his “second unidirectional label switched path is established in a message exchange initiated by the second LSP setup request message” (Paragraph 0007, lines 14–17). In other words, Lewis’ first setup message establishes a first unidirectional LSP and his second setup request message establishes a second unidirectional LSP, which is different than the claimed first and second messages.

Consequently, Lewis fails to disclose “returning a second message which comprises the binding information,” as recited by Claim 1. Moreover, Jain fails to cure the deficiencies of Lewis.

The Office Action also alleges that Lewis discloses the claimed “upon receiving the second message, the PSL router binding the work LSP with the protection LSP according to the binding information, and transmitting a notification message which comprises the binding information to the PML switched router.” *See*, Office Action at Page 3 (“See [Lewis] paragraph 0044, lines 8–14 transit router 108 returns an error notification to the LER”). Applicants disagree.

The claimed notification message that is sent to the PML indicates that binding of the work LSP and the protection LSP has been completed. Lewis, to the contrary, discloses that “if the check fails for lack of available resources, for example, transit router 108 returns an error notification to the LER 110 that made the initial request” (Paragraph 0044, lines 11–14). In other words, Lewis teaches that an error notification is sent only if his available resources are inadequate.

Consequently, Lewis fails to disclose “returning a second message which comprises the binding information,” as recited by Claim 1. Moreover, Jain fails to cure the deficiencies of Lewis.

The Office Action admits that Lewis fails to disclose the claimed “PML router assigning a label for the protection LSP based on the first message,” and cites Jain in support of its

obviousness rejection. *See*, Office Action at Page 3 ("See [Jain] paragraph 0083, lines 1–8 the protection LSPs allow data to be re-routed"). Applicants disagree.

Applicants note that these claimed features describe one of many processes for binding a protection LSP with a work LSP. However, Jain's data re-routing scheme merely accommodates failed network nodes or network links. *See*, Jain at Paragraph 0083. Furthermore, Applicants submit that Jain's process is performed *after* the protection LSP and the work LSP have been bound. In other words, Jain describes an entirely different process.

Consequently, Jain fails to disclose "PML router assigning a label for the protection LSP based on the first message," as recited by Claim 1.

The Office Action admits that Lewis fails to disclose the claimed "PML router binding the work LSP with the protection LSP according to the binding information in the notification message," and cites Jain in support of its obviousness rejection. *See*, Office Action at Page 3 ("See [Jain] paragraph 0007, lines 1–13 a fault notification is required for each LSP"). Applicants disagree.

Applicants note that these claimed features describe one of many processes for binding a protection LSP with a work LSP. However, Applicants submit that Jain's fault notification, required for each LSP, suggests that each LSP must "own" a fault notification, such that re-routing of the LSP may be performed in case there are faulty links. *See*, Jain at Paragraph 0007. In other words, Jain describes an entirely different process.

Consequently, Jain fails to disclose "PML router binding the work LSP with the protection LSP according to the binding information in the notification message," as recited by Claim 1.

Accordingly, Applicants submit that Claim 1 is allowable over the cited references. Furthermore, Claims 2–14, depending from Claim 1, are also allowable, at least for the reasons discussed above. Applicants also submit that the cited references fail to teach or suggest many of the features recited by the dependent claims, and, consequently, that these claims are independently allowable.

In view of the foregoing remarks, Applicants respectfully submit that this application is in condition for allowance and should now be passed to issue.

A Notice of Allowance is respectfully solicited.

If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

The Commissioner is hereby authorized to charge any fees and to credit any overpayments that may be required by this paper under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account No. 50-2036.

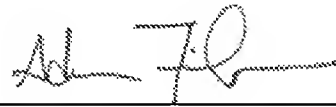
Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Adam M. Treiber', is written over a horizontal line.

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